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ABSTRACT

A project was conducted to develop a competency-based undergraduate vocational teacher education program in the areas of business education, distributive education, home economics related occupations, health related occupations, and industrial and technical education. The primary emphasis was on the development of competency-based materials and included four major stages: (1) identification of appropriate undergraduate teacher education competencies from the Cotrell list as well as additional competencies not included in the list; (2) writing, reviewing, and revising competency-based teacher education materials and developing resource materials, reference materials, and aids to accompany them; (3) assignment of materials to courses and their incorporation into the undergraduate vocational teacher education curriculum; and (4) field testing of materials during and after implementation and the development of a competency-based teacher education evaluation procedure. The major accomplishments of the project were the development of competency-based materials for the undergraduate vocational teacher education program and the elimination of repetitive content in the undergraduate program. (The assigned competencies for the courses in the undergraduate program are appended.) (EM)

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University of Pittsburgh
School of Education
Vocational Education Program

A PROJECT TO DEVELOP, TEST, AND IMPLEMENT A COMPETENCY-BASED UNDERGRADUATE VOCATIONAL TEACHER EDUCATION PROGRAM

FINAL REPORT

for

Fiscal Year, 1976-77

Submitted to

Pennsylvania Department of Education
Bureau of Vocational Education

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PURPOSE

Vocational teacher education has been primarily concerned with a subject-matter orientation rather than performance orientation. In addition, vocational teacher education has generally been a course-by-course approach for both pre-service and in-service teacher education irrespective to individual needs and prior knowledge or competency. Furthermore, vocational teacher education has generally been fragmented within each vocational service area (i.e. business education, distributive education, home economics related occupations, health related occupations, industrial and technical, etc.) while research has shown that most vocational teacher professional competencies (teaching competencies rather than occupational or subject-matter competencies) are common to all areas (Cotrell, Chase & Molnar, 1972; Courtney, 1967; Crawford, 1969; Terry, Thompson & Evans, 1972; Holfin & Courtney, 1970; Miller, 1971; Palmer & McCormick, 1961; Sjorgen, 1967; Spaziani, 1972).

Recognizing these conditions, this project's purpose was to develop a competency-based undergraduate teacher education program. This effort was directed toward both the pre-service and in-service vocational teacher education program which includes the pre-service and in-service vocational teacher education certificate program. The project was also an "across-the-board" effort involving five service areas of vocational education. The project was concerned with competency-based vocational teacher education in business education, distributive education, home economics related occupations, health related occupations, and industrial and technical education.

The project was also concerned with fulfilling the mission statements of the Vocational Education Program, the Division of Teacher Development and the School of Education. The emphasis in this relationship is a competency-based vocational

teacher education program for preparing teachers for a professional role in the urban setting and to work with disadvantaged and handicapped students.

The primary emphasis of the project was directed toward the development of competency-based materials. This emphasis included four major stages: (1) identification stage, (2) development stage, (3) implementation stage, and (4) evaluation stage. The identification stage included the identification of appropriate undergraduate teacher education competencies from the Cotrell list and the identification of additional undergraduate teacher education competencies not included in the Cotrell list. The development stage was concerned with writing, reviewing and revising competency-based teacher education materials and developing resource materials, reference materials and aids to accompany the competency-based teacher education materials. The implementation stage was concerned with the assignment of materials to courses and the incorporation of materials into the undergraduate vocational teacher education curriculum. The last stage, the evaluation stage, included the field testing of materials during and after the implementation state and the development of a competency-based teacher education evaluation procedure.

VOCATIONAL TEACHER EDUCATION PRIORITIES

The Pennsylvania Department of Education, Vocational Teacher Education 1976-77 priorities for which this project was concerned include the following:

Priority number five. The development of flexible, competency-based teacher education programs, which include such features as life experience evaluation, field experiences, directed individualized instruction, self-evaluation and differentiated staffing. The primary purpose of this project is the development of a competency-based vocational teacher education program which includes, in addition to the almost total revitalization and redesign of the undergraduate teacher education program, provisions for, during development and implementation, field experiences, individualized instruction, improved staff utilization through team teaching and differentiated staffing, self development, and self-evaluation. The instructional modules, the primary method of providing competency-based education, will include upon final completion, provisions for the basic concerns of competency-based education mentioned above.

Priority number three. An increase in the number and effectiveness of in-service activities to assist vocational teachers and leadership personnel to learn ways of improving the learning experiences of students. The competency-based vocational teacher education program will be implemented in the in-service teacher education certification program as well as the degree program. In fact, the redesign of the entire undergraduate curriculum will have an equal if not greater impact on the in-service certification program through individualized instruction, staff utilization and relevant learning activities all of which are directed toward improving learning experiences of students enrolled in vocational secondary and post-secondary education.

OBJECTIVES

The objectives of this project are related to the project purpose or goal. The accomplishment of objectives will result in the attainment of the project goal.

Project Goal

The project goal was the development and implementation of a competency-based undergraduate vocational teacher education program.

Project Objectives

The objectives are to have completed at the end of the project.

1. The identification and selection of appropriate undergraduate teacher education competencies from a list of identified competencies.
2. The writing of competency-based materials based on identified competencies.
3. The identification of additional teaching competencies not included in the list of identified competencies.
4. The writing of competency-based materials based on the identified additional competencies.
5. A review of all materials prior to trial testing in a classroom learning situation.
6. The revision of all materials prior to trial testing.
7. The trial testing of materials in actual classroom-learning situations.
8. The assignment of materials to the vocational teacher education curriculum.
9. The development of resources and references material and aids.
10. The development of a procedure for evaluation of each objective and the project in total.

SEQUENCE OF EVENTS

The sequence of events for this project as listed below are related to the previously stated objectives. The events are in a developmental-chronological order. However, many of the events have overlapping time periods while some events will be dependent on the completion of other events.

The sequence of events reflects and includes what has developed throughout the funding periods of the project.

Stage One - Competency Identification

1. Review of literature and research on competency-based teacher education.
2. Identify competency list on which to base materials development.
3. Establish competency domains.
4. Group competencies.
5. Establish categories of grouped competencies.
6. Identify and select appropriate undergraduate teaching competencies.
7. Identify additional undergraduate teaching competencies.

Stage Two - Materials Development

1. Assign identified competencies to undergraduate courses.
2. Establish materials development committees.
3. Establish materials development formats.
4. Develop competency-based materials.
5. Identify support resources and reference materials.
6. Develop support resources and reference materials.
7. Review and revise materials.

Stage Three - Materials Implementation

1. Establish field test procedures.
2. Implement field test procedures.

3. Review materials as a result of field test.

4. Revise materials as a result of field test.

5. Repeat steps two, three, and four.

6. Establish implementation procedures.

7. Implement project into undergraduate vocational teacher education curriculum.

Stage Four - Materials and Project Evaluation

1. Final review after implementation.

2. Final revision after implementation.

3. Plan dissemination procedures.

4. Implement dissemination procedures.

5. Plan project evaluation procedures.

6. Establish project evaluation procedures.

7. Implement project evaluation procedures.

PROJECT ACTIVITIES

The activities of the project were divided into four stages of development as outlined previously in the Sequence of Events. The stages reflect and include developments that have occurred thoughout the funding periods of the project. A short description of each stage follows, although, many of the activities in some stages occurred during previous funding periods rather than the particular funding period for which this report is addressed. The writer includes these activities for the purpose of summarizing the entire project.

It should be noted, however, that each stage of the project has not been restricted to any particular funding period. Activities in each stage have generally occurred in all funding periods.

Stage One - Competency Identification. This stage was primarily concerned with the identification of a competency list with which to base program and materials development. This stage, for the most part, occurred during the first year of the project.

After investigating and reviewing the many different approaches to and developments in competency identification and competency-based teacher education, the project staff and program faculty agreed to proceed with the development based on the work done by Cotrell and associates at The Center for Vocational Education, Ohio State University. The principal basis for the selection of Cotrell's competency list was the comprehensiveness of the competencies, the extent to which modules had already been under development using these competencies, and the involvement of institutions in experimenting with this work.

From the original list of 384, competencies were selected to be included in the undergraduate vocational teacher education program. The competencies can be viewed in Appendix A. These competencies were then grouped into designated catagories. These catagories were (1) planning instruction, (2) execution of instruction, (3) evaluation of instruction, (4) management, (5) guidance,

(6) community relations, (7) student organizations, (8) professional development, and (9) coordination.

Stage Two - Materials Development. This stage was concerned with the development of instructional materials centered around the identified competencies. The development of materials was a much more complex operation than anticipated at the beginning of the project. Many decisions had to be made such as what format the materials would follow, whether modules would be used exclusively, and the assignment of materials writing activities.

However, the first step in this stage was to assign the competency groups to particular undergraduate teacher education courses. Competency groups were assigned to teacher education course where a relationship existed between the competency group catagories and the course title and description. Thus, competencies grouped in the catagory evaluation of instruction were assigned to the course "Tests and Evaluation of Vocational Instruction" and competencies grouped in catagory planning instruction were grouped in the course "Planning and Organizing Vocational Instruction." Competencies assigned to particular courses can be viewed in Appendix A.

Project staff and program faculty were assigned to writing activities. These writing activities began exclusively concerned with the development of modules. A number of formats for modules were tried prior to establishing a particular format. After much hesitation and deliberation, it was decided that modules might not be the only delivery system for competency-based teacher education. Each program faculty member was encouraged to develop competency-based materials as he/she thought most appropriate for the particular course. Program faculty generally developed materials for competencies consistant with their expertise and/or the course(s) they most generally taught.

This decision was based on the concepts that competency-based instruction is concerned with explication, development, and assessment of competence and

that faculty generally involved in teaching a particular course would be more apt to use materials developed by themselves. These materials, however, did require the design of activities that developed and assessed competence. In addition, the materials were to be developed so as to enable students to progress through the activities at their own pace.

The process of writing competency-based materials has been rather slow. Writing competency-based materials was a much more complex task than anticipated at the beginning of the project. Consequently, the development of materials continued throughout the entire funding period of the project. This resulted in considerable overlapping in Stages Three and Four.

Revision of many materials did occur during this stage, however, revision resulted from trial use of materials in actual learning situations. Also, a primary source of input for revision was a two-day workshop conducted for the purpose of reviewing materials. The workshop involved all project staff, program faculty, and personnel from the Bureau of Vocational Education, Pennsylvania Department of Education. Review teams were established and provided review guidelines and materials to be reviewed. Each review team consisted of a cross section of program faculty, project staff, and Bureau personnel. In addition, each of the five service areas of vocational education -- business education, distributive education, health related occupations, home economics related occupations, and industrial education -- were represented on each review team.

Although this stage, in the beginning. was to primarily occur during a single funding period, much of the development and writing of materials continued until the end of the project. As noted previously, the initial anticipated time frame for development and writing materials was quite unrealistic.

The development of initial materials for the identified competencies in the undergraduate vocational teacher education program has been completed. During

the immediate funding period of the project the materials were reviewed and redeveloped by individuals with expertise in curriculum development and writing curriculum materials. These individuals were contracted with the Vocational Education Program.

The procedure for this review and redevelopment was based on the contracted individuals expertise and the need for improved definitive activities and assessment criteria in the competency-based materials. A number of meetings were held to deliniate assignments and responsibilities and to orient these people to the philosophy and concepts of teacher education in the Vocational Education Program.

The materials have since been completed and are in the process of being reproduced. Quantities will not be reproduced until an additional trial use in actual learning situations has been completed.

Stage Three - Materials Implementation. Complete implementation of materials will take place in the near future. A number of conditions have existed which has prevented this at this time. As was noted previously, the development and writing of materials greatly exceeded the initial anticipated. A number of the courses in the vocational teacher education program for which the materials have been assigned are only scheduled on a three year rotation. This rotation requires a rather lengthy period of time to test materials. In addition, these classes when scheduled are often cancelled because of a lack of enrollment or the enrollment is very small. This situation lengthens considerably the time period needed to test, revise and retest materials. Also, an additional review and revision process, explained in Stage Two, was initiated in an attempt to further delineate the assessment criteria for each competency.

Although the implementation of materials has been slowed down considerably, many of the materials have been trial tested. Figure 1 indicates the number of competencies and the relative stage of development toward implementation.

Stage Four - Materials and Project Evaluation. The evaluation of materials is tantamount to project evaluation. The major emphasis of the project was the development of materials for a competency-based undergraduate vocational teacher education program.

Summative evaluation of materials has not been completed at this time. The initial plan for evaluation is to compare results of the Competence-Based Teacher Education (CBTE) materials developed in this project with materials developed in the Performance Based Teacher Education (PBTE) project. The PBTE materials are those developed by the Center for Vocational Education at Ohio State University.

The procedure for evaluating these materials will be to randomly select into two groups students enrolled in the undergraduate vocational teacher education. One group will be assigned CBTE materials while the other group will be assigned materials developed with the PBTE project. An analysis of achievement of objectives will be made between the two groups.

An additional analysis will be attempted by comparing groups of students that have been through the traditional teacher education course work and students that have been assigned the CBTE materials.

FIGURE 1. COMPETENCY-BASED TEACHER EDUCATION SCHEDULE OF COMPLETION BY UNDERGRADUATE COURSES

Course No.	No. Assigned	No. Completed	% Completed	No. Revised	No. Implemented	No. 2nd Revision
VE 39	21	21	100	0	0	0
VE 41	32	32	100	32	0	0
VE 59	22	22	100	19	19	0
VE 68	46	46	100	0	0	0
VE 79	42	42	100	42	42	42
VE 81	28	28	100	0	0	0
VE 82	28	28	100	28	28	28
VE 124	44	44	100	44	44	44
VE 170	25	25	100	0	0	0
TOTALS	288	288	100	165	133	114

SUMMARY

Summarizing the project, the major accomplishment other than the development of competency-based materials for the undergraduate vocational teacher education program is the organization of content in the undergraduate program. Heretofore, a number of courses were to some extent rather repetitive. There was quite a bit of overlap of course content. The organization of competencies into courses has eliminated much of this repetitiveness.

One major constraint or problem with the project has been the attempt to involve an entire faculty that in many instances are over encumbered with other activities. Faculty and people in general will be more concerned with activities that appear to be more pressing and that have more personal involvement.

APPENDIX A

UNDERGRADUATE VOCATIONAL TEACHER EDUCATION COURSES AND ASSIGNED COMPETENCIES*

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 39	PUBLIC RELATIONS IN VOCATIONAL EDUCATION	21
	20. Identify the role of the advisory committee.	
	21. Establish the criteria for selection of the advisory committee members.	
	22. Obtain school board authorization for organizing the advisory committee.	
	23. Obtain administrative approval of the selected advisory committee members.	
	24. Publicize to the school and community the establishment of the advisory committee, its members, and its function.	
	25. Orient the advisory committee members to their role and function.	
	26. Plan the annual agenda to be considered by the advisory committee.	
	27. Communicate the date, place, and agenda for the advisory committee meetings to all persons concerned.	
	28. Invite resource persons who can provide consultant service to attend the advisory committee meetings.	
	29. Serve as the liaison for the advisory committee and the school administration.	
	32. Consult the advisory committee in planning an analysis of an occupation.	
	236. Assist in the development of policies regarding school-community relations.	
	237. Plan the school-community relations activities for vocational education program.	
	238. Procure clearance from the school administration to conduct school-community relations activities related to the vocational education program.	
	254. Maintain liaison with union officials and employers.	
	255. Maintain liaison with employment agencies.	
	256. Maintain liaison with community professional, service, fraternal, social, and religious organizations.	
	263. Consult the advisory committee to obtain information concerning their expectations of the vocational education program.	
	267. Maintain working relationships with the school administration and faculty.	

*Competency number refers to number assigned by Cotrell

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 39	PUBLIC RELATIONS IN VOCATIONAL EDUCATION (cont'd)	
	269. Maintain working relationships with the school supporting staff through cooperation and mutual effort.	
	311. Work with a team from the school and/or community on pertinent school activities.	
VE 41	INTRODUCTION TO VOCATIONAL EDUCATION	32
	30. Assist in the identification of the school's vocational education purposes and goals.	
	36. Assist in writing general objectives for the vocational education program offerings.	
	52. Review general objectives for the vocational education offerings.	
	239. Express a philosophy consistent with that of the vocational faculty.	
	268. Assist in planning the goals of the total school program.	
	270. Obtain approval from the school administration for establishing the student vocational organization.	
	271. Contact state department personnel regarding the steps to be followed in organizing a student vocational organization.	
	272. Acquaint prospective members and their parents with the purposes, activities, and values of the student vocational organization.	
	273. Organize a student committee to assess student interest in joining a vocational organization.	
	274. Assist in the development of a constitution and bylaws for the student vocational organization.	
	275. Conduct an organizational meeting for a student vocational organization.	
	276. Direct initiation activities of the student vocational organization.	
	277. Orient students to the student vocational organization.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 41	INTRODUCTION TO VOCATIONAL EDUCATION	21

299. Identify current trends of the teaching profession.
300. Promote the attainment of the goals of the teaching profession.
301. Express a personal professional philosophy consistent with the goals of the teaching profession.
302. Express a personal professional philosophy consistent with the goals of vocational education.
303. Maintain the ethical standards expected of a professional educator.
304. Exchange observational visits, innovations, and ideas with others in the profession.
305. Support professional organizations through membership and attendance at meetings.
306. Serve professional organizations as an officer and/or chairman or member of a committee.
307. Represent the teaching profession as a committee member, delegate, or program participant at meetings and activities of other related professions.
308. Participate in experimental and other data collecting research activities.
313. Consult supervisory and administrative evaluations to determine attitudes of others toward one's personal and professional abilities and limitations.
314. Use a self-analysis form to evaluate personal and professional abilities and limitations.
315. Select the teaching position which is in keeping with personal and professional abilities and limitations.
316. Maintain professional certification through enrolling in graduate, extension, and in-service education programs.
318. Keep up-to-date through reading professional literature.
319. Acquire new occupational skills and information needed to keep pace with technological advancement in vocational education.
320. Update progessional personnel file regularly.
321. Participate in noninstructional school activities (cafeteria supervision, homeroom, bus duty, chaperoning, etc.).
322. Assist with nonvocational student organization activities.

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 43	OCCUPATIONAL HYGIENE AND SAFETY	3
	183. Provide approved safety apparel and devices for vocational students assigned to hazardous equipment.	
	184. Establish a procedure for attending to first aid needs of the vocational students.	
	185. Maintain a record of safety instruction presented in compliance with safety laws and regulations.	
VE 59	PLANNING & ORGANIZING VOCATIONAL INSTRUCTION	23
	34. Identify the competencies needed for entry into an occupation.	
	35. Describe the occupational standards of performance for each task in an occupation.	
	38. Identify the skill, knowledge and attitudes required for the performance of each task included in a vocational education offering.	
	39. Write student performance objectives for the vocational education offering.	
	52. Review general objectives for the vocational education offerings.	
	54. Sequence student performance objectives for an offering in the vocational education program.	
	55. Determine student needs and interests.	
	56. Involve the students in planning a unit.	
	57. Select student performance objectives for a unit.	
	58. Write content outline for a unit.	
	59. Correlate unit content with on-the-job and/or laboratory experiences.	
	60. Determine for a unit group and individual learning experiences based on individual differences of students.	
	61. Select methods of evaluating student performance throughout a unit.	
	62. Identify the student performance objectives for a lesson.	
	63. Select teaching techniques for a lesson.	
	64. Plan the introduction of a lesson.	
	65. Plan the content of a lesson.	
	66. Plan the summary of a lesson.	
	67. Plan student learning experiences for a lesson.	
	68. Select methods of evaluating students' attainment of specific student performance objectives.	
	69. Write a lesson plan.	
	70. Obtain textbooks, references, and other instructional materials.	
VE 68	METHODS OF TEACHING IN VOCATIONAL SCHOOLS I	46
	62. Identify the student performance objectives for a lesson.	
	63. Select teaching techniques for a lesson.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 68	METHODS OF TEACHING IN VOCATIONAL SCHOOLS I (Cont'd)	
	64. Plan the introduction of a lesson.	
	65. Plan the content of a lesson.	
	66. Plan the summary of a lesson.	
	67. Plan student learning experiences for a lesson.	
	69. Write a lesson plan.	
	70. Obtain textbook, reference, and other instructional materials.	
	71. Select tools and/or equipment for a lesson.	
	72. Assemble consumable supplies for instructional purposes.	
	75. Obtain programmed instructional materials.	
	79. Conduct field trips.	
	80. Direct students in gathering information from sources in the community.	
	87. Direct student laboratory experience.	
	90. Present information by the project method.	
	93. Direct students in preparing laboratory work or job plans.	
	94. Guide students progress through the use of operation and/or job sheets.	
	100. Introduce a lesson.	
	101. Obtain summary for a lesson	
	102. Employ oral questioning techniques.	
	103. Acknowledge student verbal and nonverbal cues.	
	104. Enrich instruction to challenge the abilities of the more capable student.	
	105. Reinforce learning.	
	106. Provide remedial work for slow learners.	
	107. Employ reward techniques.	
	108. Establish frames of reference to enable the students to understand a situation from several points of view.	
	109. Apply nonverbal techniques.	
	110. Demonstrate a manipulative skill.	
	111. Present a concept of principle through a demonstration.	
	112. Give a lecture.	
	113. Give an illustrated talk.	
	114. Present information with analogies.	
	115. Present information by use of individualized instruction.	
	116. Present information through team teaching.	
	117. Give an assignment.	
	118. Present information with the assistance of a resource person.	
	140. Formulate a system of grading consistent with school policy.	
	161. Review student progress and/or achievement records to assess effectiveness of instruction.	
	186. Uphold school standards of expected student behavior.	
	187. Formulate with students acceptable standards of behavior in vocational classrooms and laboratories.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 68	METHODS OF TEACHING IN VOCATIONAL SCHOOLS (Cont'd)	
	188. Uphold acceptable standards of student behavior in vocational classrooms and laboratories.	
	189. Carry out approved disciplinary action when warranted.	
	190. Encourage students to exercise self-discipline.	
	191. Control outbursts of fighting and aggressive behavior.	
	212. Demonstrate a regard for and an interest in students as individuals.	
	214. Demonstrate personal concern for the student and his family.	
VE 79	METHODS OF TEACHING IN VOCATIONAL SCHOOLS II	42
	70. Obtain textbook, reference, and other instructional materials.	
	71. Select tools and/or equipment for a lesson.	
	72. Assemble consumable supplies for instructional purposes.	
	73. Develop original instructional materials such as individualized related assignment sheets, transparencies, and charts.	
	74. Involve students in the preparation of instructional materials.	
	75. Obtain programmed instructional materials.	
	76. Prepare instructional materials with a spirit duplicator.	
	77. Prepare instructional materials with a stencil duplicator.	
	78. Prepare instructional materials (hard copy and transparency) with a photocopier.	
	82. Conduct brainstorming sessions.	
	83. Direct student presentations.	
	84. Direct students in instructing other students.	
	85. Direct simulation techniques.	
	86. Conduct group supervised study.	
	88. Direct students in applying problem-solving techniques.	
	89. Present information through case study problems.	
	91. Direct student study of textbooks, bulletins, and pamphlets.	
	92. Direct student study of information and assignment sheets.	
	95. Lead group discussions.	
	96. Conduct panel discussions.	
	99. Employ role-playing techniques.	
	116. Present information through team teaching.	
	119. Present information with bulletin boards.	
	120. Present information with exhibits.	
	121. Illustrate with models and real objects.	
	122. Present information with an overhead projector.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 79	METHODS OF TEACHING IN VOCATIONAL SCHOOLS II (Cont'd)	
	123. Present information with an opaque projector.	
	124. Present information with filmstrips.	
	125. Present information with slides.	
	126. Present information with sound motion pictures.	
	127. Present information with single concept films.	
	128. Present information with an audio recorder.	
	129. Present information with a video recorder or closed circuit television.	
	130. Present information with a tele-lecture.	
	131. Present information with a record player.	
	132. Present information with educational television.	
	133. Direct teaching machine programmed instruction.	
	134. Present information by computer-assisted instruction.	
	135. Direct written programmed instruction.	
	136. Present information with the aid of a flannel board.	
	137. Present information with the aid of a flip chart.	
	138. Present information with the aid of a chalkboard.	
VE 81	VOCATIONAL GUIDANCE	28
	46. Analyze continual follow-up on placement, employment and training status of each graduate of the vocational education program.	
	202. Determine students' background and environment.	
	203. Administer subject-matter diagnostic tests.	
	204. Analyze students' cumulative records.	
	205. Maintain anecodotal records.	
	207. Review students' autobiographies for information to aid in understanding the students.	
	208. Assemble information for case study reports.	
	210. Maintain an open door policy for student consultation.	
	211. Encourage students to discuss career aspirations.	
	212. Demonstrate a regard for and an interest in students as individuals.	
	213. Develop constructive working relationships among students.	
	214. Demonstrate personal concern for the student and his family.	
	216. Recognize potential problems of students.	
	217. Conduct a conference with a student.	
	218. Conduct group conferences.	
	219. Confer with the students and his parents regarding his educational development.	
	221. Assist students in developing good study habits.	
	222. Establish communication patterns for exchanging information and for cooperating with the guidance staff.	
	223. Supply guidance staff with performance data about students.	
	224. Refer students to guidance staff and other specialists.	
	226. Work with other teachers to help students with individual concerns.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 81	VOCATIONAL GUIDANCE (Cont'd)	
	230. Present information to students on occupational opportunities.	
	231. Present information to students on advanced training and education at opportunities available to them.	
	232. Assist students in determining ways to best describe their salable skills.	
	233. Write letters of recommendation for students.	
	234. Assist graduating students in preparing for interviews with potential employers.	
	235. Assist students in securing and completing applications for jobs, scholarships, educational loans, or college admission.	
	333. Administer occupational tests relative to student-learner selection and placement.	
VE 82	MEASUREMENTS IN VOCATIONAL EDUCATION	28
	61. Select methods of evaluating student performance throughout a unit.	
	68. Select methods of evaluating students' attainment of specific student performance objectives.	
	139. Establish criteria for student performance.	
	140. Formulate a system of grading consistent with school policy.	
	141. Appraise students' products according to occupational performacne standards.	
	142. Appraise students' performance in relation to student performance objectives.	
	143. Evaluate individualized assignments completed under directed study.	
	144. Devise self-evaluation techniques for use by students.	
	145. Arrange for students to evaluate their own progress.	
	146. Engage in cooperative evaluation of achievement with students.	
	147. Determine student's grade based on related instruction and laboratory or on-the-job experience.	
	148. Interpret students' evaluation of instruction.	
	149. Formulate essay test items.	
	150. Formulate true-false test items.	
	151. Formulate completion test items.	
	152. Formulate matching test items.	
	153. Formulate multiple-choice test items.	
	154. Devise laboratory performance tests.	
	155. Devise laboratory performance rating sheets.	
	156. Formulate test items for an oral test.	
	157. Administer teacher-made tests.	
	158. Devise case study problems.	
	159. Analyze tests for validity.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 82	MEASUREMENTS IN VOCATIONAL EDUCATION (Cont'd)	
	160. Analyze tests for reliability.	
	161. Review student progress and/or achievement records to assess effectiveness of instruction.	
	162. Involve students in formulating the procedures for their participation in the evaluation of instruction.	
	163. Obtain information from fellow teachers and supervisory personnel regarding the quality of one's instruction.	
	164. Seek opportunities for self-evaluation of instruction.	
VE 124	COORDINATION OF COOPERATIVE EDUCATION	44
	331. Establish criteria for selection of student-learners.	
	334. Gather student-learner selection data.	
	335. Interview students and parents to obtain student-learner interest and aptitude information.	
	336. Identify a prospective student-learner on the basis of selection criteria and data.	
	337. Match a student-learner's unique characteristics with an appropriate training station.	
	338. Negotiate on-the-job training hours and wages for student-learners.	
	339. Establish criteria for evaluating the training station potential of a business or industry.	
	340. Identify prospective cooperating employers to provide on-the-job training stations.	
	341. Establish criteria to evaluate qualifications of prospective on-the-job instructors.	
	342. Assess training capability of the on-the-job instructor of the prospective training station.	
	343. Assess educational adequacy of the prospective training station's facilities and equipment.	
	344. Assess safety provisions of the facilities and equipment of the prospective training station.	
	345. Convince an employer to provide a training station for cooperative vocational education.	
	346. Arrange with a union to make contract provisions for student-learners.	
	347. Develop a teaching agreement between student-learner, parent, school, and cooperating employer.	
	348. Arrange school and work schedules with student-learners and school and employing personnel.	
	349. Develop a systematic training plan with the cooperating employer and/or the on-the-job instructor.	
	350. Aid student-learners in procuring work permits.	
	351. Assist the cooperating employer in obtaining information concerning federal and state wage and hour classifications.	
	353. Assist the cooperating employer in verifying the legality of employing a student-learner in a hazardous occupation.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 124	COORDINATION OF COOPERATIVE EDUCATION (Cont'd)	
	357. Prepare the student-learner for an interview with the cooperating employer and training station personnel.	
	358. Assist the student-learner in on-the-job training orientation.	
	359. Assist the cooperating employer's personnel in accepting the training status and role of the student-learner.	
	360. Maintain good working relationships with training station personnel.	
	361. Develop a procedure to insure student's safety and protection in the training station.	
	362. Develop a plan for supervision of on-the-job training.	
	363. Inform the administration of the coordination itinerary.	
	364. Assess the on-the-job experience daily reports with the student-learner to plan future instruction.	
	365. Encourage the on-the-job instructor to follow the training plan in providing experiences for the student-learner.	
	366. Maintain the student-learner's progress reports for on-the-job training and related instruction.	
	367. Examine the student-learner's progress reports to determine future on-the-job training experiences and related instruction.	
	368. Maintain a record of individual work hours, wages, and work experiences of on-the-job training.	
	369. Assist the student-learner in the solution of problems related to on-the-job training.	
	370. Control student-learner absenteeism from school and on-the-job training.	
	371. Control the transfer of student-learners within the cooperative vocational education program and to other school programs.	
	372. Conduct termination procedures for on-the-job training for the student-learner when conditions demand it.	
	373. Sponsor an employer-employee appreciation event.	
	374. Evaluate the student-learner's work qualities and habits on the job.	
	375. Evaluate the student-learner's personal traits and characteristics on the job.	
	376. Check the student-learner's progress in acquiring skills on the job.	
	377. Check the student-learner's progress with the on-the-job instructor and other training station personnel.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 124	COORDINATION OF COOPERATIVE EDUCATION (Cont'd)	
	378. Assess the student-learner's performance with the assistance of the on-the-job instructor.	
	379. Obtain suggestions from the on-the-job instructor to guide the selection of lessons for related instruction.	
	380. Evaluate the quality of the on-the-job training received by the student-learner.	
VE 170	PROBLEMS OF ORGANIZATION AND MANAGEMENT IN VOCATIONAL EDUCATION	
	165. Compile a list of supplies needed for the academic year.	
	166. Identify new tools and/or equipment needed for the academic year.	
	167. Recommend reference books and periodicals related to vocational education that should be added to the library.	
	169. Plan an operating budget proposal for consumable supplies, services, and instructional materials.	
	170. Prepare a budget for estimating travel expenses incurred in vocational activities.	
	172. Prepare purchase requests for approved vocational equipment and supplies.	
	173. Design a procedure for acquiring needed consumable supplies and materials.	
	174. Accept gifts or donations of supplies and equipment for the vocational education program in accordance with school policy.	
	175. Devise a system for determining and collecting student fees for consumable supplies.	
	176. Structure a filing system for records and report forms.	
	177. Supply the data for vocational reports required by the state department of education.	
	178. Devise a filing system for instructional essentials.	
	180. Record vocational student attendance according to school policy.	
	181. Record vocational students' grades according to school policy.	
	182. Assemble individual student files documenting personal characteristics, attitudes, and grades.	
	192. Maintain an inventory of vocational tools, supplies, and equipment.	
	193. Establish a system for repairing and servicing tools and equipment in the laboratory.	
	179. Devise a system for maintaining occupational opportunity information for use by vocational students.	
	194. Arrange for the storage and security of supplies and equipment.	
	195. Implement student check-out procedures for tools, supplies, and equipment used in the laboratory.	
	196. Direct students in a system for cleaning and maintaining the laboratory.	

Course No.	Course Title/Competency Number and Statement	No. of Comp. Assigned
VE 170	PROBLEMS OF ORGANIZATION AND MANAGEMENT IN VOCATIONAL EDUCATION (Cont'd)	
	197. Schedule laboratory equipment for maximum utilization by students.	
	198. Arrange layout of the vocational laboratory to simulate the occupational environment.	
	199. Arrange laboratory work areas and storage space to facilitate student work performance.	
	200. Control heat, light, and ventilation in vocational laboratories and classrooms.	

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